REMARKS

We have canceled claims 1-8, 33-38, 60, 65, and 68. We have also amended claim 59 to include the limitation of claim 60 relating to offsets. After entering the proposed amendments, claims 9-32, 39-59, 61-64, 66, 67, and 69-71 will be pending in this application.

We have also amended independent claims 9, 20, and 59 to recite "the plurality of codewords defining an error-correcting code" instead of "the plurality of codewords being associated with an error-correcting code." We believe that this change coupled with the discussion below should make the claim clearer.

The Examiner asked for a clarification of the meaning of "error correcting code." We note that the specification describes what is meant by error correcting codes in connection with the described embodiments. It makes reference to Fig. 8 which illustrates a system that uses an error-correcting code. The relevant paragraphs are excerpted below:

> [0067] Referring to FIG. 8, an error-correcting code is used to enable transmission of a message intact over a noisy communication channel. A message m to be transmitted is chosen from message space 10. The set of messages M in message space 10 may be represented mathematically as $M=\{0, 1\}^k$ where each message m in the set of messages M is a binary k-bit string. There are 2^k messages in the set of messages M because each bit in the k-bit string can have one of two values.
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> [0068] The message m is provided as input to a translation function g. The translation function g translates the message m into a codeword c in codeword space 20. The translation function g represents a one-to-one mapping of a message m from message space 10 to a codeword c in codeword space 20. Accordingly, for each message m, there is one corresponding codeword c. An error-correcting code for use with a binary set of messages M that are k-bits in length contains a set of codewords C including 2^k codewords since there is one codeword c for each of the 2^k messages. The operation of the translation function g can be described mathematically as g: $M \rightarrow C$. The set of codewords C in codeword space 20 may be described mathematically as $C\{0, 1\}^n$ where each codeword c in the set of codewords C is a binary n-bit string. Generally, the message m is different from codeword c at least because codeword c contains redundant elements. If a codeword c contains redundant elements, the length of the codeword c bit string n will be greater than the length of the message m bit string k.
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> [0069] The codeword c is transmitted 30 over a communication channel. Noise 35 may be introduced during transmission 30 so that a corrupted codeword i, which is generally some variation of codeword c, is received at the receiving end of the communication channel. The corrupted codeword i is provided as input to a decoding function f. The decoding function f reconstructs the codeword c from the corrupted codeword i. The redundant elements of the codeword c allow the decoding function to perform this reconstruction.

> [0070] The decoding function f maps a corrupted codeword i to a codeword c in the set of codewords C. A corrupted codeword i may be an arbitrary n-bit binary string. When the decoding function f is successful, it maps a corrupted codeword i to the nearest codeword c in the set of codewords C. In this context, the nearest codeword c is the codeword c that is the closest by an appropriate metric from the corrupted codeword.
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> [0081] It should be noted, however, that an error-correcting code traditionally involves changing a message m to a codeword c before transmission 30. In some situations, however, the translation function g cannot be applied effectively. For instance, when the message m itself contains errors, generating redundancy is problematic. The errors in the message m may well be propagated and reinforced by the redundancy in the corresponding codeword c. This situation exists in the case of a secret pattern that comprises a sequence of discrete graphical choices. It may be difficult for a user to make or repeat discrete graphical choices on a graphical interface without errors; accordingly, a sequence of values that corresponds to a secret pattern should be considered a message m that includes errors. Thus, embodiments of the present invention do not use error-correcting codes in the traditional way.
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> [0082] Embodiments of the present invention use the decoding function f of an error-correcting code to relate a value, which corresponds to a discrete graphical choice, to a codeword c. In some embodiments, the value is treated as a corrupted codeword i in an error-correcting code. In such embodiments, the decoding function f decodes the value into a codeword c as if the value were a corrupted codeword i.

The codewords when corrupted by "noise" are capable of being decoded back into the original codewords due to "redundancy" that is contained in the codewords or stated differently because the codewords form or define an error correcting code.

This definition is generally consistent with the Examiner's understanding of the meaning of the term "error correcting code" as a term of art.

For the reasons that were presented in our response of September 20, 2005, we submit that the claims are allowable over the prior art that has been cited by the Examiner and therefore we ask that the paten be allowed to issue.

We also note that on March 2, 2005 we submitted an Information Disclosure Statement with the accompanying PTO 1449. Our records seem to indicate that we have not yet received a copy of that PTO 1449 with the entries checked off by the Examiner indicating that the references have been considered. We ask the Examiner to forward a copy of the initialed PTO 1449. For the Examiner's convenience, we enclose a copy of the PTO 1449 that we filed.

Please apply any charges not covered, or any credits, to Deposit Account No. 08-0219.

Respectfully submitted,

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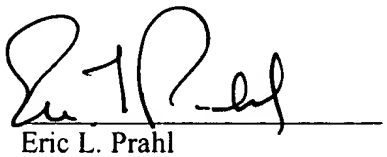

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